INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY. DOCKET NO.	DIVISIONAL OF SERIAL NO.
1579-857	09/960,717
APPLICANT	
HAYNES et al	1648
FILING DATE	GROUP
August 25, 2003	

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
JS		5,518,723	5/1996	DeVico et al	—	—	
JS		5,843,454	12/1998	Devico et al	—	—	

FOREIGN PATENT DOCUMENTS

		DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

JS		Stamatatos et al, "Generation and Structural Analysis of Soluble Oligomeric gp140 Envelope Proteins Derived from Neutralization-Resisant and Neutralization-Susceptible Primary HIV Type 1 Isolates", AIDS Research and Human Retroviruses 16(10):981-994 (2000)
JS		Hoffman et al, "Stable exposure of the coreceptor-binding site in a CD4-independent HIV-1 envelope protein", Proc. Natl. Acad. Sci. USA 96:6359-6364 (1999)
JS		Golding et al, "Phorbol Ester-Induced Down Modulation of Tailless CD4 Receptors Requires Prior Binding of gp120 and Suggests a Role for Accessory Molecules", Journal of Virology 69(10):6140-6148 (1995)

*Examiner		Date Considered	11/23/04

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY. DOCKET NO.: 1579-857

DIVISIONAL OF SERIAL NO.: 09/960,717

APPLICANT: HAYNES et al

FILING DATE: August 25, 2003

GROUP:

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

JR	Kwong et al, "Structure of an HIV gp120 envelope glycoprotein in complex with the CD4 receptor and a neutralizing human antibody", Nature 393:648-659 (1998)
JR	Wyatt et al, "Involvement of the V1/V2 Variable Loop Structure in the Exposure of Human Immunodeficiency Virus Type 1 gp120 Epitopes Induced by Receptor Binding", Journal of Virology 69(9):5723-5733 (1995)

*Examiner: JR | Date Considered: 11/23/04

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

Sheet 3 of 8

Atty. Docket No.	Divisional of Serial No.
1579-857	09/960,717
Applicant	
HAYNES et al	
Filing Dat	**Group**
August 25, 2003	

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

		Furata et al, "Capture of an early fusion-active conformation of HIV-1 gp41", Nature Struct. Biol. 5:276 (1998)
		LaCasse et al, "Fusion-Competent Vaccines" Broad Neutralization of Primary Isolates of HIV", Science 283:357 (1997)
		Boots et al, "Anti-Human Immunodeficiency Virus Type 1 Human Monoclonal Antibodies that Bind Discontinuous Epitopes in the Viral Glycoproteins Can Identify Mimotopes from Recombinant Phage Peptide Display Libraries", AIDS Research and Human Retroviruses 13(18):1549-1559 (1997)
		Bieniasz et al, "HIV-1-induced cell fusion is mediated by multiple regions within both the viral envelope and the CCR-5 co-receptor", The EMBO Journal 16(10):2599-2609 (1997)
		Wild et al, "Propensity for a leucine zipper-like domain of human immunodeficiency virus type 1 gp41 to form oligomers correlates with a role in virus-induced fusion rather than assembly of the glycoprotein complex", Proc. Natl. Acad. Sci. USA 91:12676-12680 (1994)
		Collman et al, "An Infectious Molecular Clone of an Unusual Macrophage-Tropic and Highly Cytopathic Strain of Human Immunodeficiency Virus Type 1", Journal of Virology 66(12):7517-7521 (1992)
		Alam et al, "T-cell-receptor affinity and thymocyte positive selection", Letters to Nature 381:616-620 (1996)
		O'Shannessy et al, "Immobilization Chemistries Suitable for Use in the BIAcore Surface Plasmon Resonance Detector", Analytical Biochemistry 205:132-136 (1992)
		Mascola et al, "Immunization with Envelope Subunit Vaccine Products Elicits Neutralizing Antibodies against Laboratory-Adapted but Not Primary Isolates of Human Immunodeficiency Virus Type I", J. Infect. Dis. 173:340-348 (1996)
		Rizzuto et al, "A Conserved HIV gp120 Glycoprotein Structure Involved in Chemokine Receptor Binding", Science 280:1949-1953 (1998)
		Wyatt et al, "Involvement of the V1/V2 Variable Loop Structure in the Exposure of Human Immunodeficiency Virus Type 1 gp120 Epitopes Induced by Receptor Binding", Journal of Virology 69(9):5723-5733 (1995)

*Examiner		Date Considered	11/23/04

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

768933

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY. DOCKET NO.: 1579-857

DIVISIONAL OF SERIAL NO.: 09/960,717

APPLICANT: HAYNES et al

FILING DATE: August 25, 2003

GROUP:

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		5,019,387	5/1991	Haynes et al			
		5,013,548	5/1991	Haynes et al			
		5,352,576	10/1994	Haynes et al			
		5,993,819	11/1999	Haynes et al			
		5,516,632	5/1996	Palker et al			

FOREIGN PATENT DOCUMENTS

		DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT YES	ABSTRACT NO
		WO 95/29700	11/1995	PCT				
		WO 97/14436	4/1997	PCT				
		WO 93/15750	8/1993	PCT				
		WO 02/024149	3/2002	PCT				
		WO 01/56355	8/2001	PCT				

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

*Examiner		Date Considered	11/23/04

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY. DOCKET NO.: 1579-857

DIVISIONAL OF SERIAL NO.: 09/960,717

APPLICANT: HAYNES et al

FILING DATE: August 25, 2003

GROUP:

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

		Trkola et al, "Human Monoclonal Antibody 2G12 Defines a Distinctive Neutralization Epitope on the gp120 Glycoprotein of Human Immunodeficiency Virus Type 1", Journal of Virology 70(2):1100-1108 (1996)
		Mo et al, "Human Immunodeficiency Virus Type 1 Mutants That Escape Neutralization by Human Monoclonal Antibody IgG1b12", Journal of Virology 71(9):6869-6874 (1997)
		Ye et al, "Association of Structural Changes in the V2 and V3 Loops of the gp120 Envelope Glycoprotein with Acquisition of Neutralization Resistance in a Simian-Human Immunodeficiency Virus Passaged In Vivo", Journal of Virology 74(24):11955-11962 (2000)
		Fouts et al, "Neutralization of the Human Immunodeficiency Virus Type 1 Primary Isolate JR-FL by Human Monoclonal Antibodies Correlates with Antibody Binding to the Oligomeric Form of the Envelope Glycoprotein Complex", Journal of Virology 71(4):2779-2785 (1997)
		Sullivan et al, "CD4-Induced Conformational Changes in the Human Immunodeficiency Virus Type 1 gp120 Glycoprotein: Consequences for Virus Entry and Neutralization", Journal of Virology 72(6):4694-4703 (1998)
		Moore et al, "Exploration of antigenic variation in gp120 from clades A through F of human immunodeficiency virus type 1 by using monoclonal antibodies", Journal of Virology 68(12):8350-8364 (1994) – Abstract
		Jiang et al, "A Conformation-Specific Monoclonal Antibody Reacting with Fusion-Active gp41 from the Human Immunodeficiency Virus Type 1 Envelope Glycoprotein", Journal of Virology 72(12):10213-10217 (1998)
		Rimsky et al, "Determinants of Human Immunodeficiency Virus Type 1 Resistance to gp41-Derived Inhibitory Peptides", Journal of Virology 72(2):986-993 (1998)
		Earl et al, "Immunogenicity and Protective Efficacy of Oligomeric Human Immunodeficiency Virus Type 1 gp140", Journal of Virology 75(2):645-653 (2001)
		Collman et al, "An infectious molecular clone of an unusual macrophage-trophic and highly cytopathic strain of human immunodeficiency virus type 1", Journal of Virology 66(12):7517-7521 (1992) – Abstract
		Muster et al, "A conserved neutralizing epitope on gp41 of human immunodeficiency virus type 1", Journal of Virology 67(11):6642-6647 (1993) – Abstract
		Cormier et al, "Specific interaction of CCR5 amino-terminal domain peptides containing sulfotyrosines with HIV-1 envelope glycoprotein gp120", PNAS 97(11):5762-5767 (2000)
		Hoffman et al, "A biosensor assay for studying ligand-membrane receptor interactions: Binding of antibodies and HIV-1 Env to chemokine receptors", PNAS 97(21):11215-11220 (2000)
		Myszka et al, "Energetics of the HIV gp120-CD4 binding reaction", PNS 97(16):9026-9031 (2000)
		Roben et al, "Recognition properties of a panel of human recombinant Fab fragments to the CD4 binding site of gp120 that show differing abilities to neutralize human immunodeficiency virus type 1", Journal of Virology 68(8):4821-4828 (1994) – Abstract
		Muster et al, "Cross-neutralizing activity against divergent human immunodeficiency virus type 1 isolates induced by the gp41 sequence ELDKWAS", Journal of Virology 68(6):4031-4034 (1994) – Abstract
		Earl et al, "Native oligomeric human immunodeficiency virust type 1 envelope glycoprotein elicits diverse monoclonal antibody reactivities", Journal of Virology 68(5):3015-3026 (1994) – Abstract

*Examiner: [signature] Date Considered: 11/23/04

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Atty. Docket No. 1579-857

Divisional of Serial No. 09/960,717

Applicant HAYNES et al

Filing Dat August 25, 2003

Group

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

JK	Robertson et al, Recombination in AIDS Viruses, J. Mol. Evol. 40:249-259 (1995)
JK	Shu et al, Helical Interactions in the HIV-1 gp41 Core Reveal Structural Basis for the Inhibitory Activity of gp41 Peptides, Biochemistry 39:1634-1642 (2000)

*Examiner	JK	Date Considered	11/23/04

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

768940

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY. DOCKET NO.: 1579-857

SERIAL NO.:

APPLICANT: HAYNES et al

FILING DATE: August 25, 2003

GROUP:

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, etc.)

		Fouts et al, "Crosslinked HIV-1 envelope-CD4 receptor complexes elicit broadly cross-reactive neutralizing antibodies in rhesus macaques", PNAS 99(18):11842-11847 (2002)
		Fouts et al, "Expression and Characterization of a Single-Chain Polypeptide Analogue of the Human Immunodeficiency Virus Type 1 gp120-CD4 Receptor Complex", Journal of Virology 74(24):11427-11436 (2000)
		Devico et al, "Monoclonal Antibodies Raised against Covalently Crosslinked Complexes of Human Immunodeficiency Virus Tuype 1 gp120 and CD4 Receptor Identify a Novel Complex-Dependent Epitope on gp120", Virology 211:583-588 (1995)
		Devico et al, "Covalently Crosslinked Complexes of Human Immunodeficiency Virus Type 1 (HIV-1_ gp120 and CD4 Receptor Elicit a Neutralizing Immune Response That Includes Antibodies Selective for Primary Virus Isolates", Virology 218:258-263 (1996)
		Vita et al, "Rational engineering of a miniprotein that reproduces the core of the CD4 site interacting with HIV-1 envelope glycoprotein", PNAS 96(23):13091-13096 (1999)

*Examiner: [signature] Date Considered: 11/23/04

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY. DOCKET NO.: 1579-857

DIVISIONAL OF SERIAL NO.: 09/960,717

APPLICANT: HAYNES et al

FILING DATE: August 25, 2003

GROUP:

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

		Moore et al, "Exploration of antigenic variation in gp120 from clades A through F of human immunodeficiency virus type 1 by using monoclonal antibodies", Journal of Virology 68(12):8350-8364 (1994)
		Collman et al, "An infectious molecular clone of an unusual macrophage-trophic and highly cytopathic strain of human immunodeficiency virus type 1", Journal of Virology 66(12):7517-7521 (1992)
		Muster et al, "A conserved neutralizing epitope on gp41 of human immunodeficiency virus type 1", Journal of Virology 67(11):6642-6647 (1993)
		Roben et al, "Recognition properties of a panel of human recombinant Fab fragments to the CD4 binding site of gp120 that show differing abilities to neutralize human immunodeficiency virus type 1", Journal of Virology 68(8):4821-4828 (1994)
		Muster et al, "Cross-neutralizing activity against divergent human immunodeficiency virus type 1 isolates induced by the gp41 sequence ELDKWAS", Journal of Virology 68(6):4031-4034 (1994)
		Earl et al, "Native oligomeric human immunodeficiency virust type 1 envelope glycoprotein elicits diverse monoclonal antibody reactivities", Journal of Virology 68(5):3015-3026 (1994)

*Examiner: Jeffrey Stucker — Date Considered: 11/23/04

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)